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Washington State Department of Ecology  
Shorelands and Environmental Assistance Program  
Attn: Ms. Cedar Bouta  
P.O. Box 47600  
Lacey, Wa 98504-7600

Re: Proposed Changes to Chapter 173-26, Shoreline Management Act  
Geoduck Rulemaking

The Sierra Club appreciates the amount of work Ecology staff has done to provide initial aquaculture rulemaking. There is no doubt that the trend toward industrial shellfish aquaculture requires rulemaking to protect our Washington shoreline habitat and native species. Since there has never been a state regulatory framework for aquaculture that provides environmental protections, it is important that a permit is required with adequate conditions. Please accept our comments on the proposed Changes to Chapter 173-26, Shoreline Management Act.

We are pleased to see the following language changes that increase shoreline protection:

1. Page 34: Description of species is broadened beyond "priority species."
2. Page 36: "Large" is dropped from woody debris definition. Wood debris of all sizes is vital to these systems.
3. Page 30: Language added to provide for more ecologically intact shorelines areas from the water through the upland area.

On the other hand, we find that the language added for aquaculture needs to be strengthened to be consistent with increased shoreline protections and the intent of HB2220.

While decision makers have gained a great deal of knowledge regarding the environmental and social impacts of geoduck operations since 2007 when HB2220 passed, a complete scientific analysis has not been conducted to assess the impacts to the nearshore. The preliminary SeaGrant science is only looking at three issues which are a fraction of the impacts that have been observed. In fact, there has been no attempt to assess the environmental impacts of the total operation from clearing the nearshore to harvesting. An Environmental Impact Statement should be required that scientifically

examines the entire geoduck aquaculture operation and that information should be used as a basis for permit conditions.

The proposed changes to Chapter 173-26, Shoreline Management Act allows counties to site geoduck aquaculture as if it was a given fact that industrial geoduck aquaculture should be expanded in our shorelines. If the same type of protections were required for industrial aquaculture that are being required for upland development, geoduck aquaculture would never been approved in the first place. Developers cannot just create “innovative” ways to build more residential houses or commercial buildings without scrutiny and compliance with land use, building codes and standards. Industrial aquaculture that directly impacts the nearshore should be held to the same measure.

The industrial practices that are now being used by some growers like oyster grow bags and extensive netting over tidelands should be examined and addressed in the permits.

**Addendum To 2003 Proposed Shoreline Master Program Guidelines Rule Amendment Supplemental Final Environmental Impact Statement**

<http://www.ecy.wa.gov/pubs/1006017.pdf>

It is clear from reading this Final Environmental Impact Statement that Ecology has predicated their geoduck rulemaking on the notion that standards can be established over time as geoduck aquaculture expands. This flawed approach does not take into account that the shellfish industry is picking off the most pristine habitat rich sites that are limited and cannot be replaced. It also does not acknowledge that once these sites are approved, they are grandfathered and are “forever” sites. Industry has already argued at the SARC meetings that once a site is approved, new regulations do not apply to them.

Best Management Practices did not work in the past and will only work in the future if the standard practices are not destructive. While Shellfish Industry Best Management Practices may be workable for the other types of aquaculture, they will not stop the destructive practices that are an integral part of intertidal geoduck aquaculture. So which geoduck aquaculture practice do you improve? Do you only let industry clear some of the natural debris and vegetation, do you only let them eliminate a certain percentage of the organisms essential for salmon, do you allow them to just alter these priority habitats to a certain degree and what percentage of birds, natural shellfish, sand dollars, moon snails, crabs do you let them eliminate? How much toxic/leaching PVC marine debris do you allow in Puget Sound? If you are enforcing “no net loss,” the answer would be no to all of the above.

Geoduck feedlots are the one industrial activity in the nearshore that directly “disturbs” more ecological functions than any normal upland activity that is regulated. While the following statement may apply to historical types of aquaculture (oysters, clams), it certainly does not apply to “innovative” geoduck aquaculture: “Most negative environmental impacts associated with aquaculture stem from poor planning, inappropriate

site selection and management procedures, as well a lack of attention to environmental protections (Lucas & Southgate, 2000)”(Page 5-EIS). The methods used are well planned and allowed, their site selection is generally the best sandy/gravel sites that are forage fish or designated critical salmon habitat, their procedures alter the entire site and native species populations and decision makers have allowed Best Management Practices to override environmental protections.

We also disagree with the following statement on Page 5 of the EIS that states:

“There are a handful of areas of uncertainty, including:”

- Potential effects on eelgrass, forage fish habitat and essential fish habitat;
- Possible impacts to benthic invertebrates;
- Potential effects on water quality;
- Cumulative impacts, potential for expansion, and carrying capacity; and
- Resolution of conflicting shoreline uses, including aesthetic concerns and marine debris.

This list of impacts does not begin to acknowledge the numerous impacts to the substrate, native habitat, native species or shoreline processes. To simplify the adverse impacts of geoduck aquaculture puts our native species at risk and impedes the recovery of Puget Sound.

### **Specific Objections to Proposed WAC**

#### **1. Ecologically Intact Water Areas Should Be Identified and Given Protective Environmental Designations**

A single Aquatic environment will not protect the important natural resources that require a high level of protection. RCW 90.58.020, provides that the policy of the Shoreline Management Act “contemplates protecting against adverse impacts to the public health, the land and its vegetation and wildlife, and the waters of the State and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.”

Separate environments in the aquatic environments should relate to the upland designations. At a minimum, an aquatic equivalent of a Natural environment should be an integral part of these guidelines and be afforded the greatest protection from commercial uses. The SMP guidelines state that Natural environments (and their equivalent) are supposed to be limited to very low intensity. Geoduck operations, oysters in grow bags and clams with netting do not fit this definition and should not be allowed in this environment. Aquaculture practices are becoming more intensive and many of the current practices significantly alter the ecological functions and natural character of the shoreline.

Buffers have not been mentioned but should be an integral component when aquaculture is allowed. Critical Salmon Habitat and Forage Fish Habitat are priority habitats and buffers are critical to protect these areas.

2. The term “uses” replaces “development” to make the paragraph consistent throughout and to ensure the language applies to aquaculture in all cases per Attorney General Opinion 2007 No. 1. WAC 173-26-211

This Attorney General Opinion was based on limited industry data, has not incorporated any new information or science findings, is not consistent with recovery efforts and should not be used for future decisions. Aquaculture is already considered development in several counties that are trying to protect their shoreline areas from adverse impacts as required by the Shoreline Management Act. To change this paragraph merely accommodates shellfish industry demands to ease regulations.

3. New sections added to Aquatic Designation regarding reserve areas for protecting and restoring ecological functions. Language added to clarify that local government should ensure adequate shoreline space for projected water-dependent uses such as aquaculture. WAC 173-26-211

Unless only those aquaculture operations that do not alter the ecological functions are allowed, this section is in conflict with its own language. The intensive uses and high densities of aquaculture species not normally in the nearshore do alter the ecological functions, not restore them. This section should be clarified as to what constitutes acceptable aquaculture.

#### **WAC 173-26-241: Aquaculture use provisions revised**

4. Language added that allow local governments to non-contiguous parcels under one permit, as long as those parcels are reasonably close geographically.

This language assumes that all sites are the same and encourages leasing nearshore for expansion. If protection of the nearshore is an objective, this should not be encouraged.

5. Language that encourages local governments to allow submittal of federal or state permit applications in partial fulfillment of local permit application requirements.

Protection of the nearshore and restoration efforts will be impeded if local governments are not responsible for rigorous standards for industrial uses of the nearshore in their respective area.

#### **HB2220—Initiated for Science and Protection of the Environment**

Citizens requested Rep Lantz to sponsor a bill for two purposes: To initiate intertidal geoduck research to quantify impacts and to require regulation that would limit the expansion of intertidal geoduck feedlots until it was proven that this activity was

consistent with the environmental protections required by the Shoreline Management Act.

#### HB2220 Requirements

According to HB2220, Sec 5: "The department of ecology shall develop by rule, guidelines for the appropriate siting and operation of geoduck aquaculture operations to be included in any master program under this section."

According to HB2220, Sec 4: "The shellfish aquaculture regulatory committee is established to, consistent with this section, serve as an advisory body to the department of ecology on regulatory processes and approvals for all current and new shellfish aquaculture activities, and the activities conducted pursuant to RCW 90.58.060, as the activities relate to shellfish. The shellfish aquaculture regulatory committee is advisory in nature, and no vote or action of the committee may overrule existing statutes, regulations, or local ordinances."

According to HB2220, Sec 1: "The sea grant program at the University of Washington shall, consistent with this section, commission a series of scientific research studies that examines the possible effects, including the cumulative effects, of the current prevalent geoduck aquaculture techniques and practices on the natural environment in and around Puget Sound, including the Strait of Juan de Fuca."

### **Important Impacts of Geoduck Operations That Have Not Been Addressed**

#### 1. Marine Plastic Pollution

According to Section 4 (2) (i): The shellfish regulatory committee shall develop recommendations as to--- Methods for quantifying and reducing marine litter. These recommendations were not made according to this section.

#### 2. Marine Chemical/Toxic Pollution

There is no plan to minimize environmental damage from the introduction of massive quantities of PVC plastics into our marine waters that have not been tested for their known chemical contaminants.

#### 3. Fish Habitat and Prey Impacts

We have seen no provisions in the language to incorporate environmental protections needed to protect critical fish habitat and prey species from the known impacts to ESA listed species. The preliminary SeaGrant results presented at the June 2, 2010 SARC meeting demonstrated significant impacts to prey base of ESA listed salmon and eelgrass. According to Glenn Van Blaricom's June 2 SARC presentation, the most abundant category of tube worm population (ESA listed species prey) remained severely suppressed after 6 months and there has been no extended study to determine density or recovery time.

#### 4. Native Species

We see no protections from any state agency for Puget Sound native species intertidal invertebrate life such as sand dollars, sea stars, moon snails, ghost shrimp, mud shrimp, barnacles, cockles, native blue mussels and crabs. No protections were discussed for vertebrate animals such as perch, flatfish, sculpin, shorebirds and waterfowl. According to the new industry terrestrial based "Pest Management Strategic Plan for Bivalves in Oregon and Washington," these animals that are treasured by citizens and are an integral part of the food web will be removed/destroyed or harassed. Since at the present time the aquaculture industry is exempt from regulations that protect these species, each acre of geoduck farming allows the removal/destruction of these species. The wholesale elimination of our native species is not consistent with the intent of the Shoreline Management Act or the Public Trust Doctrine.

There are no protections for other essential marine vegetation from geoduck operations. The following marine vegetation that industry has categorized as "weeds" in the shellfish industry Pest Management document are not adequately protected: Algae, Japanese eelgrass (fish habitat per WDF&W) and Native eelgrass.

For more information on the elimination of our native species by the shellfish industry, the following link has been provided for your convenience:

<http://washington.sierraclub.org/tatoosh/Aquaculture/OR-WABivalvePMSP.pdf>

#### 5. Water Quality Certification

According to our last request, Ecology has not conducted or published results of water quality tests during and after geoduck harvesting. We still do not have any information on water quality certification for geoduck aquaculture. Improving water quality is one of the most discussed Puget Sound goals and it is imperative that the siltation from these operations meet EPA water quality standards. Independent water quality testing results should be made available so informed comments and decisions can be made.

#### 6. Siting

Ecology does not have adequate data to determine the impact of geoduck aquaculture on the nearshore. To our knowledge there is no analysis of existing geoduck aquaculture sites in relation to an inventory of sand/gravel sites in Puget Sound or the requested location or number of sand/gravel expansion sites by industry. Industry on numerous occasions stated there are only a limited number of suitable sand/gravel sites that will accommodate geoduck aquaculture substrate requirements. Ecology should be protecting these limited sand/gravel sites which are located beneath coastal feeder bluffs that are priority habitats for ESA listed species spawning habitats. The adverse environmental impact of allowing these limited priority habitats to be altered by geoduck aquaculture is contrary to Puget Sound and salmon recovery plans

It was stated by Ecology staff in the June 2 SARC meeting that permit conditions for geoduck aquaculture are analogous to gravel mining or deep water dredging. We do agree that geoduck aquaculture should be categorized as an industrial extraction operation that does not belong in residential areas, near designated critical salmon habitat, forage fish areas or areas with marine vegetation/eelgrass.

The following information should be reviewed by decision makers to insure a balanced perspective as they develop regulations to protect our nearshore from industrial aquaculture impacts:

**Sierra Club Website**

<http://washington.sierraclub.org/tatoosh/Aquaculture/index.asp>

The following YouTubes were provided to Sierra Club by concerned South Sound Sierra Club members:

**YouTube—I Am The Puget Sound & Industrial Aquaculture**

<http://www.youtube.com/watch?v=crsiWqypsDE>

**YouTube—I Am The Puget Sound Pest—The Sequel**

<http://www.youtube.com/watch?v=nlh047aEG5w>

While it is apparent that there is a great deal of pressure to legitimize geoduck operations as a new "fishery," Ecology's role should not be compromised. We support Ecology's efforts to adopt aquaculture rulemaking as long as the conditions protect our valuable natural resources. The use of a conditional use permit should be encouraged along with a shoreline development permit at the County level. Allowing an industrial activity like geoduck aquaculture to expand without clear regulations when the impacts have never been fully evaluated, puts native species that are already in decline at risk.

We would like to discuss the plans for moving the aquaculture rulemaking forward at your earliest convenience. If you have any questions, please do not hesitate to contact me.

Sincerely,  
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